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(FILE 'HOME' ENTERED AT 15:30:22 ON 30 APR 2004)

FILE 'STNGUIDE' ENTERED AT 15:30:28 ON 30 APR 2004

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INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS,
DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 15:30:49 ON 30 APR
2004

SEA (CARBOMOYLASE AND AMINO ACID)

1 FILE BIOTECHABS
1 FILE BIOTECHDS
SEA CARBOMOYLASE

1 FILE BIOTECHABS
1 FILE BIOTECHDS
5 FILE DGENE
1 FILE PASCAL
L1 QUE CARBOMOYLASE

FILE 'DGENE, BIOTECHDS, PASCAL' ENTERED AT 15:33:16 ON 30 APR 2004

L2 7 S L1

L3 7 DUP REM L2 (0 DUPLICATES REMOVED)

=> d 13 ibib ab 1-7

L3 ANSWER 1 OF 7 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 2001-06663 BIOTECHDS
TITLE: Optimization of the immobilization parameters and operational stability of immobilized hydantoinase and L-N-carbamoylase from *Arthrobacter aurescens* for the production of optically pure L-amino acids;
separate immobilization of dihydropyrimidinase and carbamoylase on Eupergit-C, Eupergit-C250L or EAH-Sepharose support and use for L-amino acid production
AUTHOR: Ragnitz K; Syldatk C; *Pietzsch M
CORPORATE SOURCE: Univ.Stuttgart
LOCATION: Institute of Biochemistry and Biotechnology, Spielmannstr. 7, 38106 Braunschweig, Germany.
Email: m.pietzsch@tu-bs.de
SOURCE: Enzyme Microb.Technol.; (2001) 28, 7-8, 713-20
CODEN: EMTED2
ISSN: 0141-0229
DOCUMENT TYPE: Journal
LANGUAGE: English

AB L-N-carbamoylase from *Arthrobacter aurescens* DSM 3747 and dihydropyrimidinase (hydantoinase, EC-3.5.2.2) from *A. aurescens* DSM 3745 were separately immobilized on Eupergit-C, Eupergit-C250L or EAH-Sepharose. The immobilization of wild-type, recombinant (expressed in *Escherichia coli* W3110 using plasmid pBW30 or plasmid pAW178-2) or hexahistidine-tagged enzymes was compared. For both enzymes, the use of recombinant proteins resulted in enhanced specific activities, especially when using a hydrophilic support such as EAH-Sepharose. Use of a hexahistidine affinity tail reduced activity by over 80%. In packed bed reactors, Eupergit C250-L (NH₂)-immobilized hydantoinase and EAH-Sepharose-immobilized carbamoylase showed half-lives of approximately 14,000 and 900 hr, respectively. Specific activities were 2.5 and 10 U/mg wet support, respectively, sufficient to fulfil industrial requirements. The immobilized hydantoinase showed optimal activity at pH 8.5-10 and 45-60 deg, and the immobilized carbamoylase at pH 9.5 and 60 deg. The immobilized enzymes can be operated in a single reactor for the production of optically pure L-amino acids. (21 ref)

L3 ANSWER 2 OF 7 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1988-0206072 PASCAL
TITLE (IN ENGLISH): Enzymatic production of L-tryptophan from DL-5-indolylmethylhydantoin by *Flavobacterium* sp.
AUTHOR: NISHIDA Y.; NAKAMICHI K.; NABE K.; TOSA T.
CORPORATE SOURCE: Tanabe Seiyaku co. ltd., Yodogawa-ku Osaka 532, Japan
SOURCE: Enzyme and microbial technology, (1987), 9(12), 721-725, 17 refs.
ISSN: 0141-0229 CODEN: EMTED2
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: CNRS-18233

L3 ANSWER 3 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABB99396 Protein DGENE
TITLE: New D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117, useful for preparing an enantiomerically concentrated amino acid -
INVENTOR: Drauz K; May O; Bommarius A; Syldatk C; Altenbuchner J; Werner M; Siemann-Herzberg M
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.
PATENT INFO: WO 2002077212 A2 20021003

APPLICATION INFO: WO 2002-EP1840 20020221
PRIORITY INFO: DE 2001-10114999 20010326
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2003-029934 [02]
CROSS REFERENCES: N-PSDB: ABV72500

DESCRIPTION: Amino acid sequence of D-**carbomoylase**.

AB The present sequence represents a D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 4 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: ABV72507 DNA DGENE

TITLE: New D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117, useful for preparing an enantiomerically concentrated amino acid -

INVENTOR: Drauz K; May O; Bommarius A; Syltatk C; Altenbuchner J; Werner M; Siemann-Herzberg M

PATENT ASSIGNEE: (DEGS)DEGUSSA AG.

PATENT INFO: WO 2002077212 A2 20021003 49p

APPLICATION INFO: WO 2002-EP1840 20020221

PRIORITY INFO: DE 2001-10114999 20010326

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2003-029934 [02]

DESCRIPTION: PCR primer used to amplify DNA encoding D-**carbomoylase**.

AB PCR primers ABV72505-07 were used to amplify DNA encoding D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117. The amplified sequence was cloned for recombinant expression of the enzyme. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 5 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: ABV72506 DNA DGENE

TITLE: New D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117, useful for preparing an enantiomerically concentrated amino acid -

INVENTOR: Drauz K; May O; Bommarius A; Syltatk C; Altenbuchner J; Werner M; Siemann-Herzberg M

PATENT ASSIGNEE: (DEGS)DEGUSSA AG.

PATENT INFO: WO 2002077212 A2 20021003 49p

APPLICATION INFO: WO 2002-EP1840 20020221

PRIORITY INFO: DE 2001-10114999 20010326

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2003-029934 [02]

DESCRIPTION: PCR primer used to amplify DNA encoding D-**carbomoylase**.

AB PCR primers ABV72505-07 were used to amplify DNA encoding D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117. The amplified sequence was cloned for recombinant expression of the enzyme. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 6 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABV72505 DNA DGENE
TITLE: New D-Carbamoylase enzyme from Arthrobacter crystallopoietes
DSM 20117, useful for preparing an enantiomerically
concentrated amino acid -
INVENTOR: Drauz K; May O; Bommarius A; Sylatk C; Altenbuchner J;
Werner M; Siemann-Herzberg M
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.
PATENT INFO: WO 2002077212 A2 20021003 49p
APPLICATION INFO: WO 2002-EP1840 20020221
PRIORITY INFO: DE 2001-10114999 20010326
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2003-029934 [02]
DESCRIPTION: PCR primer used to amplify DNA encoding D-
carbomoylase.

AB PCR primers ABV72505-07 were used to amplify DNA encoding D-Carbamoylase
enzyme from Arthrobacter crystallopoietes DSM 20117. The amplified
sequence was cloned for recombinant expression of the enzyme. The
D-Carbamoylase is useful for preparing an enantiomerically concentrated
amino acid, where hydantoins are converted in the system
hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin
racemase or an enzyme that is capable of racemization of carbamoylamino
acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 7 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABV72500 DNA DGENE
TITLE: New D-Carbamoylase enzyme from Arthrobacter crystallopoietes
DSM 20117, useful for preparing an enantiomerically
concentrated amino acid -
INVENTOR: Drauz K; May O; Bommarius A; Sylatk C; Altenbuchner J;
Werner M; Siemann-Herzberg M
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.
PATENT INFO: WO 2002077212 A2 20021003 49p
APPLICATION INFO: WO 2002-EP1840 20020221
PRIORITY INFO: DE 2001-10114999 20010326
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2003-029934 [02]
CROSS REFERENCES: P-PSDB: ABB99396
DESCRIPTION: Nucleotide sequence of D-**carbomoylase.**

AB The present sequence encodes a D-Carbamoylase enzyme from Arthrobacter
crystallopoietes DSM 20117. The D-Carbamoylase is useful for preparing an
enantiomerically concentrated amino acid, where hydantoins are converted
in the system hydantoinase/D-carbamoylase, optionally in the presence of
a hydantoin racemase or an enzyme that is capable of racemization of
carbamoylamino acids or for preparing enzymes modified by genetic
engineering.